

EXHIBIT A



Deposition of:
**Robert M. McMeeking , PhD, NAE,
FRSE**

January 30, 2019

In the Matter of:
**In Re: Bard IVC Filters Products
Liability**

Veritext Legal Solutions

1 A No.

2 Q Are they all equally effective?

3 A Their effectiveness would vary according to their
4 design.

5 Q Are all penetration limiters the same design?

6 A No.

7 Q Are all equally effective?

8 A No.

9 Q Is there more than one variation of a two-tiered
10 design?

11 A Yes.

12 Q So, all two-tiered designs are not the same;
13 correct?

14 A They are not the same.

15 Q And all two-tiered designs are not equally
16 effective?

17 A Yes. I would accept that. Yes.

18 Q And you did not include in your report any design
19 drawing of a two-tiered design; correct?

20 A Not in this report -- I didn't provide any design
21 drawings. I provided an image of the Simon Nitinol
22 filter, but no design drawings.

23 Q So, when you have proposed a two-tiered design as
24 an alternative to the Recovery filter, your proposal is
25 essentially the Simon Nitinol filter?

1 A That's correct.

2 Q Your report does not propose any specific
3 dimensions for the caudal anchors you suggest; correct?

4 A That's correct.

5 Q It does not propose any specific dimensions for
6 the penetration limiters?

7 A Correct.

8 Q And other than to provide an image of the Simon
9 Nitinol filter, you don't provide any dimensions of the
10 two-tiered design; correct?

11 A That's correct.

12 Q There is no photograph -- well, no picture or
13 graphic depiction of the alternative filter that you
14 believe should have been designed?

15 A No.

16 Q Your report does not criticize Bard's use of the
17 material Nitinol for the filter, does it?

18 A No, it does not.

19 Q And your report does not address what sort of
20 material should be used for a device such as this, does
21 it?

22 A That's correct.

23 Q And it does not propose an alternative material
24 to the Nitinol that was used?

25 A That's correct.

1 Q Now, let's go beyond this specific report. Am I
2 correct that in none of the expert reports you have
3 prepared in this litigation have you provided any design
4 drawings of caudal anchors that you believe should have
5 been implemented?

6 A That's correct.

7 Q And is it correct that in all of your expert
8 reports in this litigation, you have never prepared -- or
9 proposed any design drawings for the penetration limiters
10 you suggest?

11 A That's correct.

12 Q And is it correct that in this litigation you
13 have never in any of your expert reports provided design
14 drawings or graphic depictions for the two-tiered design
15 you propose other than to provide an image of the Simon
16 Nitinol filter?

17 A That's correct.

18 Q And you have not tried to devise any two-tiered
19 design other than the dimensions of the Simon Nitinol
20 filter itself as a two-tiered design that would have
21 improved the performance; correct?

22 A That's correct.

23 Q Now, with regard specifically to the caudal
24 anchors -- well, let me back up.

25 In some of your previous reports you -- to do

1 those reports, you did a number of calculations; correct?

2 A That's correct.

3 Q But you have never done any calculations focused
4 specifically on caudal anchors and what effect they would
5 have in improving the performance of the filter; correct?

6 A That's correct.

7 Q And, likewise, you have never done any specific
8 calculations regarding the effect that penetration
9 limiters would have on the filter?

10 A That's correct.

11 Q And you have never done any specific calculations
12 as to the effect that a two-tiered design would have on
13 the filter?

14 A That's correct.

15 Q And you have never done any specific calculations
16 as to the effect that the rounded chamfer would have on
17 the filter; correct?

18 A No. I disagree with that.

19 Q Okay. Tell me the basis for that.

20 A Well, in the MDL report I present calculations
21 for the effect of the rounded chamfer in regard to the
22 levels of strain and stress which are associated with it
23 in the adjacent strut.

24 Q Would you agree with me that in your view a
25 filter that had the rounded chamfer, like you've

1 discussed, but did not have penetration limiters, caudal
2 anchors, or a two-tiered design could fracture?

3 A Yes. It could.

4 Q In other words, the rounded cap, in the absence
5 of those other design features, would not necessarily
6 prevent a fracture; correct?

7 A That's correct.

8 Q Do you know anything about some of the other
9 medical conditions Mrs. Tinlin has had or does have now?

10 A No, I do not.

11 Q And you don't have any information concerning the
12 tissue quality firmness or flexibility of her vena cava,
13 do you?

14 A I do not, no.

15 Q Or what her blood flows was or is?

16 A No.

17 Q What her respiration rate was --

18 A No, I do not.

19 Q -- or is?

20 What her experiences have been with Valsalva?

21 A No.

22 Q And neither Dr. Hurst nor Dr. Muehrcke or any
23 other doctor have given you any such information
24 regarding those things, have they?

25 A That's correct.

1 Q And as a part of your work in this case, you did
2 not investigate anything specific about Mrs. Tinlin's
3 anatomy; correct?

4 A Correct.

5 Q And other than to read the reports of Drs. Hurst
6 and Muehrcke, you did not investigate anything about her
7 medical conditions; correct?

8 A That's correct.

9 Q Are you aware that Mrs. Tinlin's physicians
10 recommended and prescribed a retrievable filter for her?

11 A I'm not aware of their recommendations.

12 Q Let's turn to page 3 of your report, if we could.
13 At the bottom of the first full paragraph, after you've
14 discussed some of these alternative design features, you
15 state, and I quote:

16 "Many of these design features existed
17 in other IVC filter products already on
18 the market, including the Simon Nitinol
19 filter, the Cook Guthrie Tulip filter, the
20 Greenfield filter, and the Cook Bird's
21 Nest filter."

22 Correct?

23 A Correct.

24 Q Do you know whether any of those retrievers --
25 any of those filters you identify are retrievable?

1 A Yes. The Gunther Tulip filter is retrievable.

2 Q Do you know whether the Cook -- well, the others
3 are not?

4 A Oh, sorry. Yes, the others are not.

5 Q Do you know, with regard to the Cook Gunther
6 Tulip filter, whether there was a limitation on the
7 amount of time it could be implanted before retrieval?

8 A Yes.

9 Q And what was that limitation?

10 A It's on the order of seven to ten days.

11 Q And, by comparison, what was the indwell time
12 that would be permissible or okay for a Recovery filter?

13 A Recovery filter is optional in that it could be
14 left in on a permanent basis, according to the
15 instructions for use, is my understanding.

16 Q Could it be retrieved later than seven to ten
17 days after implant?

18 A It's my understanding that it can be retrieved
19 beyond seven days.

20 MR. STOLLER: Object to foundation.

21 BY MR. NORTH:

22 Q Are you aware of medical studies and reports
23 indicating the successful retrieval of the Recovery
24 filter many months after it was implanted?

25 A I am.

1 correct?

2 A That's correct.

3 Q It's entirely possible that using a two-tiered
4 design would not have prevented Mrs. Tinlin from
5 sustaining any of the injuries she alleges in this case;
6 correct?

7 A That's correct.

8 Sorry. Could repeat the question.

9 Q It's entirely possible that using a two-tiered
10 design would not have prevented Mrs. Tinlin from
11 sustaining any of the injuries she alleges in this case?

12 A Yes. I agree.

13 Q And you have done no calculations in this
14 litigation as to -- to try to quantify the extent to
15 which a two-tiered design might reduce the risk of
16 Mrs. Tinlin having sustained the injuries she did?

17 A That's correct.

18 Q It's entirely possible that improving the shape
19 of the cap, as you suggest, would not have prevented
20 Mrs. Tinlin from sustaining any of the injuries she
21 alleges; correct?

22 A That's correct.

23 Q And you have performed no calculations in this
24 litigation to quantify the extent to which a cap would
25 have reduced the risk to Mrs. Tinlin of sustaining the

1 injuries?

2 A That's correct.

3 Q And, therefore, it is possible that adding all of
4 the design features you suggest would not have prevented
5 Mrs. Tinlin from sustaining the injuries she alleges;
6 correct?

7 A That's correct.

8 Q You are not aware of any single IVC filter that
9 carries no risk of fractures; correct?

10 A I'm not aware of any, that's correct.

11 MR. NORTH: Why don't we take a break. We've
12 been going 75 minutes, I think.

13 MR. STOLLER: Fine.

14 THE VIDEOGRAPHER: The time is 11:15 a.m., and we
15 are off the record.

16 (Recess.)

17 THE VIDEOGRAPHER: The time is 11:26 a.m., and
18 we're back on the record.

19 BY MR. NORTH:

20 Q Dr. McMeeking, you agree that all IVC filters can
21 tilt; correct?

22 A I'm not sure I agree with that. But many of them
23 do tilt, yes, or can tilt.

24 Q And all IVC filters can penetrate?

25 A Yes. I agree with that.

1 Q All IVC filters can migrate; correct?

2 A I agree with that, yes.

3 Q And all IVC filters can fracture?

4 A I think that's likely the case, yes, I agree.

5 Q Now, you said -- seemed to apply that not all IVC
6 filters can tilt. Are there some that you believe cannot
7 tilt?

8 A I think the ones that are quite cylindrical in
9 shape are perhaps unable to tilt.

10 Q But many of the filters that are on the market
11 can tilt; correct?

12 A That's correct.

13 Q As we sit here today, Doctor, you cannot say to a
14 reasonable degree of engineering certainty that the
15 design changes you discuss in your report would have
16 prevented Mrs. Tinlin's injuries, can you?

17 A That's correct.

18 Q And you cannot say by what percentage the risk
19 would have been reduced with these design changes, can
20 you?

21 A That's correct.

22 Q Is there anywhere in your report where you
23 outline the specific health conditions Mrs. Tinlin
24 suffers that might have impacted her filter in and its
25 performance?

1 A No.

2 Q Was that significant to you in preparing your
3 report?

4 A Could you repeat the question.

5 Q Was that significant to you in preparing her
6 report -- your report?

7 A You mean leaving it out?

8 Q Was the fact -- well, were any specific health
9 conditions that she suffers that might have impacted her
10 filter or its performance -- was any of that important to
11 you in coming up with your opinions?

12 A No. It was not.

13 Q And you have no idea whether Mrs. Tinlin suffered
14 from any particular health condition that could have
15 increased the likelihood that her Recovery filter would
16 have tilted, migrated, perforated, or fractured; correct?

17 A Correct.

18 Q You understand that Mrs. Tinlin needed an
19 inferior vena cava filter; correct?

20 MR. STOLLER: Foundation.

21 THE WITNESS: Well, I assume, because her doctors
22 prescribed one, that she was considered to need one, yes.

23 BY MR. NORTH:

24 Q And, therefore, you understand that at least her
25 doctors thought she could have died had she not received

1 a filter; correct?

2 MR. STOLLER: Objection. Foundation.

3 THE WITNESS: I'm not sure if they thought she
4 would have died. But I believe that they assessed that
5 it would avoid problems that she might face in terms of
6 her health.

7 BY MR. NORTH:

8 Q You have no reason to dispute whether or not
9 Mrs. Tinlin's Recovery filter might have saved her life;
10 correct?

11 A I have no reason to dispute that, no.

12 Q You did no additional testing for your report in
13 this case; correct?

14 A That's correct.

15 Q And you did no additional calculations for your
16 report in this case?

17 A That's correct.

18 Q None of the opinions you provide in this report
19 regarding design alternatives have been published in any
20 literature by you, have they?

21 A By me, no. Correct.

22 Q Are you aware of any literature regarding
23 penetration limiters or caudal anchors and their efficacy
24 on filters?

25 A Well, yes.

1 Q And what is that?

2 A There are papers that look at clinical experience
3 with filters that have and do not have those features on
4 them.

5 Q I'm talking about from an engineering standpoint.
6 Are you aware of any publications that analyze from an
7 engineering perspective how caudal anchors or penetration
8 limiters perform?

9 A Not from an engineering assessment, no.

10 Q And you haven't published anything from an
11 engineering perspective regarding penetration limiters,
12 caudal anchors, two-tiered design, or a rounded chamfer;
13 correct?

14 A That's correct.

15 Q And, therefore, your opinions regarding those
16 design alternatives have not been peer reviewed, have
17 they?

18 A Not directly, no.

19 Q You're not aware of any industry or government
20 standards that would require any of the design
21 alternatives that you've proposed; correct?

22 A Yes. I'm aware of some.

23 Q What would those be?

24 A In the sense that companies are expected to
25 reduce all risks to the extent practicable.

1 believe I did a specific calculation for 28 millimeters.

2 BY MR. NORTH:

3 Q And therefore, as you sit here today, you cannot
4 say what the strain on the filter would be in a diameter
5 of 28 millimeters; correct?

6 A That's correct.

7 Q Let's look at Table 2. What does that show?

8 A This shows the results for a Recovery filter. A
9 similar calculation, except now the arm of the filter has
10 perforated the wall of the vena cava.

11 Q And, again, you're trying to calculate the
12 maximum strains; correct?

13 A That's correct.

14 Q And you did that -- those calculations with
15 various assumptions for the diameter of the vena cava;
16 correct?

17 A That's correct.

18 Q And those ranged from 14 millimeters to
19 21 millimeters?

20 A That's correct.

21 Q And you did not do these calculations with any
22 assumption of a vena cava with 28 millimeters; correct?

23 A That's correct.

24 Q And, so, you're not able to say, as you sit here
25 today, what -- you're not able to quantify the strains in

1 this analysis that would be present in a vena cava with
2 28 millimeters in diameter?

3 A That's correct.

4 Q You are aware that later generations of Bard
5 filters, such as the Meridian and the Denali came
6 equipped caudal anchors and penetration limiters;
7 correct?

8 A I'm aware that Meridian has caudal anchors. The
9 Denali has penetration limiters. And I believe the
10 Denali has caudal anchors as well, but I don't recall
11 exactly whether that's the case.

12 Q Are you aware of any single IVC manufacturer who
13 incorporated caudal anchors or penetration limiters in a
14 retrievable filter prior to the time that Bard did?

15 A Yes.

16 Q Who is that?

17 A The Tulip. The Gunther Tulip. The Gunther
18 Tulip.

19 Q And when did they do that?

20 A The -- it came out in the United States in about
21 2002, 2003. But it had been available in Europe about
22 ten years prior to that.

23 Q When you say in -- available in Europe, you mean
24 in the Cook filter?

25 A Yes. The Cook Gunther Tulip filter was available

1 in Europe during the 1990s.

2 Q And you have previously given -- filed a report
3 in the Cook litigation that that Gunther Tulip filter is
4 defectively designed, haven't you?

5 A I have, yes.

6 Q Are you aware of any IVC filter manufacturer
7 other than Cook who incorporated anchors or limiters in a
8 retrievable filter prior to Bard?

9 A No, I am not.

10 Q You cannot speak in any detail or any depth about
11 the process by which Bard studied and ultimately
12 implemented anchors and limiters; can you?

13 A Sorry. Can I correct my previous answer?

14 Q Yes.

15 A Could you ask me the question again. Because I
16 think I answered it wrongly.

17 Q Are you aware of a single IVC filter manufacturer
18 other than Cook who incorporated anchors or limiters in a
19 retrievable filter any earlier than Bard did?

20 A Yes, I am.

21 Q Ask who is that?

22 A It's -- Rex/Argon is the company, and the filter
23 is the Option. And it had a penetration limiter. And it
24 was -- it was cleared in 2009, is my recollection.

25 Q Other than Cook, are you aware of any IVC

1 manufacturer who incorporated anchors or limiters in a
2 retrievable filter prior to 2005 when --

3 A No.

4 Q -- Mrs. Tinlin received her filter?

5 A No. I am not aware of any.

6 Q So, the only filter available at the time
7 Mrs. Tinlin had her -- only retrievable filter available
8 at the time she had her implant in 2005 that had limiters
9 or anchors was the Cook filter that you have also opined
10 is defective?

11 MR. STOLLER: Object to the form.

12 THE WITNESS: That's correct.

13 BY MR. NORTH:

14 Q Have you given any opinions on the design of the
15 Argon filter you just mentioned?

16 A No.

17 Q Okay. You cannot speak in any detail or in any
18 depth about the process by which Bard studied and
19 ultimately implemented anchors and limiters, can you?

20 A No, I cannot.

21 Q And as an engineer in understanding the product
22 development process, as you do, you would agree it's not
23 just a matter of Bard snapping its fingers and suddenly
24 limiters and anchors appear and work fine; correct?

25 A That's correct.

1 Q It requires some development work in the design
2 and testing of those features; correct?

3 A That's correct.

4 Q And design and testing to ensure that the
5 addition of those features do not compromise the safety
6 or effectiveness of the device in other ways; correct?

7 A That's correct.

8 Q And you are not aware of what Bard did as far as
9 developing or testing initial designs for limiters and
10 anchors that may not have worked ultimately?

11 A I'm not aware of that work, no.

12 Q In this litigation you have criticized all
13 generations of Bard filters; correct?

14 A That's correct.

15 Q And you have also criticized the design of the
16 Denali, which has both anchors and limiters; correct?

17 A Can I go back and rephrase my answer?

18 Q Yes.

19 A I don't think I've criticized the Simon Nitinol
20 filter. I've identified some features of it that are
21 relevant to what might happen to it. But I don't believe
22 I've criticized the Simon Nitinol filter.

23 Q Well, you've criticized the design of every
24 single retrievable filter produced by Bard; correct?

25 A That's correct.

1 Q And that includes the Denali filter which has
2 limiters and anchors; correct?

3 A That's correct.

4 Q Now, you have done no finite element analyses
5 specific to the Eclipse, Meridian, or Denali filters;
6 correct?

7 A So, the Eclipse is simply an electro polished
8 version of the G2. And I did calculations for the G2.
9 So, in that sense I did calculations for the Eclipse.

10 Q You have done none for the Meridian or Denali;
11 correct?

12 A None specifically for the Meridian and the
13 Denali.

14 Q Now, your opinions include a number of criticisms
15 of Bard's testing; correct?

16 A That's correct.

17 Q You have made no efforts personally to replicate
18 their testing; correct?

19 A That's correct.

20 Q And you have made no efforts to devise
21 alternative test protocols for tests that you believe
22 should be done; correct?

23 A Not protocols. I haven't devised protocols, no.

24 Q And you have not developed any protocols for
25 bench testing that you believe should have been

1 performed; correct?

2 A That's correct.

3 Q And do I recall correctly from some of your
4 previous testimony that you have never done any bench
5 testing of a medical device in your career?

6 A I don't do bench testing. So, it's not in my
7 professional activities.

8 Q What is an experimentalist?

9 A An experimentalist is someone who does
10 experiments in the laboratory, physical experiments.

11 Q And that's not the sort of work you do; correct?

12 A That's correct. I am not an experimentalist.

13 Q And you don't have a laboratory, in fact, for
14 testing purposes?

15 A That's correct. I do not.

16 Q And, as a consequence, you do no animal testing;
17 correct?

18 A I do no animal testing. That's correct.

19 It's not the kind of thing that mechanical
20 engineers like me would do.

21 Q You're aware that caudal anchors were first
22 utilized by Bard in the Meridian filter; correct?

23 A That's correct.

24 Q And that was first cleared for sale by the FDA in
25 August of 2011?

1 A I don't recall the exact date. But I'll accept
2 that if that is what you say.

3 Q And do you have any evidence as to whether those
4 caudal anchors would have worked without compromising
5 other elements of Bard filters before their
6 implementation in 2011?

7 A I have no evidence, no.

8 Q And you have -- do you even know how many
9 prototypes of caudal anchors they went through before
10 they developed that design?

11 A No.

12 Q Do you know how many years they worked on that
13 design?

14 A No.

15 Q And do you know what testing they did on caudal
16 anchors?

17 A I'd have to review. But I know they did some
18 testing of the Meridian filter, yes.

19 Q Well, before they actually developed the Meridian
20 filter, do you know what testing they did of caudal
21 anchors as a potential design attribute of the filters?

22 A No, I do not.

23 Q Now, you had previously stated the opinion,
24 however, that the caudal anchors on the Meridian were not
25 effective; correct?

1 A That's correct.

2 Q And it is your opinion that tilt perforation
3 endothelialization and fracture in the Meridian filter is
4 not significantly better, if any better, than in the
5 Eclipse filter; correct?

6 A That's correct.

7 Q And you're aware that the Denali filter was
8 cleared on May 15 of 2013?

9 A Again, I'm not exactly sure of the date. But
10 I'll accept that that is it if you're telling me so.

11 Q And the Denali had penetration limiters for the
12 first time; correct?

13 A That's correct.

14 Q Are you aware of any manufacturer that utilized
15 penetration limiters prior to Bard?

16 A Yes.

17 Q And who was that?

18 A That was the Rex/Argon Option filter.

19 Q But you have criticized the Denali penetration
20 limiters as inadequate; correct?

21 A That's correct.

22 Q And it was your -- it is your opinion that the
23 Denali penetration limiters are too small; correct?

24 A That's correct.

25 Q But you've made no prototype of what you believe

1 would be the correctly sized penetration limiter;
2 correct?

3 A That's correct.

4 Q And, in fact, you've never identified what that
5 size would be?

6 A That's correct.

7 Q And you have not done any calculations or testing
8 to determine if limiters can be increased significantly
9 in size and still fit into the sheath used to implant
10 them; correct?

11 A That's correct.

12 Q Or what the impact of larger penetration limiters
13 would be on the retrieval of the filter; correct?

14 A That's correct.

15 Q So, while you believe that the Denali penetration
16 limiters are too small to be sufficiently effective, you
17 have done no analysis to determine whether larger
18 penetration limiters would be feasible with this device,
19 have you?

20 A That's correct.

21 Q And you have done no analysis of how larger
22 penetration limiters may have compromised the performance
23 or safety of the Denali filter, have you?

24 A No. I have not.

25 Q I believe you previously testified that it is

1 your expectation that the Denali filter will have a
2 comparable number of adverse events as any of the other
3 Bard filters, notwithstanding the use of anchors and
4 limiters?

5 A That's correct.

6 Q And it's your belief that the Denali filter
7 suffers from the same problems that you believe the
8 earlier generation filters have even with the use of
9 limiters and anchors?

10 A That's correct.

11 Q So, therefore, you do not believe it's sufficient
12 for a filter to simply have some sort of anchors or
13 penetration limiters in order to improve safety; correct?

14 A That's correct. They need to be designed to be
15 effective.

16 Q They have to be the proper size; correct?

17 A Correct.

18 Q They have to be a size that does not compromise
19 the performance or the safety in some other way of the
20 device; correct?

21 A Well, they -- they should be designed in such a
22 way that they reduce the risks to the extent practicable
23 and that -- that that is balanced against the benefits of
24 the filter.

25 Q And you have made no effort in this litigation to

1 figure out the precise dimensions or size of these design
2 features that would accomplish what you just described?

3 A That's correct.

4 Q Nowhere in your report do you compare the anchors
5 and limiters on the Denali filter to the anchors and
6 limiters on any other type of filter such as the Simon
7 Nitinol, Greenfield, Tulip, Bird's Nest, et cetera?

8 A That's correct.

9 Q Nothing in your reports address whether the
10 anchors and limiters on the Meridian and/or Denali differ
11 from those, if any, on the filters -- other filters
12 you've identified in your report; correct?

13 A I'm sorry. Could you repeat that question.

14 Q There is nothing in your report that compares the
15 anchors and limiters on the Meridian and Denali filters
16 with any anchors or limiters on the other manufacturers'
17 models?

18 A Yeah. I make no comparison.

19 Q Okay. Let's look at page 2 of your present
20 report, please, which is Exhibit 1. If we look down the
21 second full paragraph, that begins with the statement,
22 and I quote:

23 "Bard made a choice to design the
24 Recovery filter without caudal anchors or
25 other features that would prevent and/or

1 minimize caudal migration."

2 Is that correct?

3 A That's correct.

4 Q A choice is a decision. Would you agree with
5 that?

6 A Yes, I agree.

7 Q And to know if a choice was actually made, you
8 have to know what somebody's motivation was; correct?

9 MR. STOLLER: Object to form.

10 THE WITNESS: I'm not -- could you repeat the
11 question. I'm not sure if I understand it.

12 BY MR. NORTH:

13 Q Well, to know if a choice was consciously made,
14 you have to know a person's state of mind; correct?

15 A I don't think so.

16 MR. STOLLER: Form.

17 BY MR. NORTH:

18 Q Why is that?

19 A Because the fact is that the filter was produced
20 without a caudal anchor. And, so, therefore, that --
21 that decision was made to produce it that way. That's
22 the meaning I'm trying to convey in that sentence.

23 Q Well, you have no evidence one way or the other
24 that Bard actually considered but then rejected caudal
25 anchors as a design feature for the Recovery filter;

1 correct?

2 A That's correct.

3 Q And you cannot testify as to Bard's motives in
4 deciding or not deciding to use caudal anchors, can you?

5 A No, I cannot.

6 Q Or Bard's intent --

7 A No.

8 Q -- in making --

9 A Sorry.

10 Q -- that choice as you call it?

11 A That's correct.

12 Q Or their state of mind?

13 A That's correct.

14 Q Now, a couple of paragraphs below you say,
15 Bard -- or the next paragraph. I'm sorry.

16 "Bard made a choice to design the
17 Recovery filter without perforation
18 limiters or other features that would
19 prevent and/or minimize perforation of
20 the filter limbs through the walls of the
21 IVC."

22 Correct.

23 A Correct.

24 Q And do you have any evidence one way or the other
25 that Bard considered but then rejected perforation

1 limiters for use with the Recovery filter?

2 A I have none.

3 Q And, again, with regard to a decision, if one was
4 even made, regarding penetration limiters, you can't
5 testify as to Bard's motives; correct?

6 A Correct.

7 Q Or their intent?

8 A Correct.

9 Q Or their state of mind?

10 A Correct.

11 Q Okay. Let's go to the next paragraph. "Bard" --
12 it begins, and I quote again:

13 "Bard made a choice to design the
14 Recovery filter without features that
15 would prevent and/or minimize tilt or
16 that would limit the negative
17 consequences of tilt."

18 That's what you said; correct?

19 A That's correct.

20 Q But you have no evidence that Bard considered
21 features to eliminate or reduce tilt but then rejected
22 them in the design of the Recovery filter, do you?

23 A That's correct.

24 Q And, therefore, you can't testify as to Bard's
25 motives, intent, or state of mind with regard to any

1 design features to eliminate or reduce tilt?

2 A Correct.

3 Q And you're not aware of any design feature or any
4 IVC filter that totally eliminates the risk of tilt; is
5 that correct?

6 A That's correct.

7 Q And you cannot say that any feature, if added to
8 the Recovery filter, would have eliminated tilt in
9 Mrs. Tinlin's case; correct?

10 A That's correct.

11 Q And you cannot say by what percentage of risk
12 tilt would have been -- what percentage risk of tilt
13 occurring would have been reduced -- let me try this
14 again.

15 You can't quantify how much the risk of tilt
16 would be reduced in a filter with any particular safety
17 feature added to the Recovery; correct?

18 A That's correct.

19 Q And you cannot say that Mrs. Tinlin's injuries
20 would be avoided all together by the addition of any
21 particular safety feature to eliminate or reduce tilt?

22 A That's correct.

23 Q Now, you've given previous testimony and you've
24 talked in your previous reports about Bard's testing and
25 analysis; correct?

1 A That's correct.

2 Q But you don't have any evidence one way or the
3 other that Bard considered but then rejected specific
4 tests regarding tilt, penetration limiters, or caudal
5 anchors; correct?

6 A That's correct.

7 Q And, therefore, with regard to those decisions or
8 the lack of decision, you cannot testify as to Bard
9 motives, intent, or state of mind?

10 A That's correct.

11 MR. NORTH: I have gone much quicker than I
12 thought. I think I'm about finished.

13 MR. STOLLER: Let's take a break?

14 MR. NORTH: Want to take a break?

15 MR. STOLLER: Yes.

16 THE VIDEOGRAPHER: The time is 12:07 p.m., and we
17 are off the record.

18 (Recess.)

19 THE VIDEOGRAPHER: The time is 2:12 -- I'm
20 sorry -- 12:12 p.m., and we're back on the record.

21 BY MR. NORTH:

22 Q Dr. McMeeking, let's look at page 3 of Exhibit 1,
23 your report for this case, the first full paragraph that
24 begins "all of the design features discussed."

25 Do you see that?

1 A I do, yes.

2 Q I'd like for you to look at the last sentence of
3 that paragraph. And could you read that into the record.

4 A Of this paragraph?

5 "Many of these design features existed
6 in other IVC filter products already on
7 the market, including the Simon Nitinol
8 filter, the Cook Gunther Tulip filter,
9 the Greenfield filter, and the Cook
10 Bird's Nest filter."

11 Q I will represent to you, Dr. McMeeking, that we
12 have scanned -- more than scanned. We have flyspecked
13 every previous report you've submitted in this litigation
14 and found nothing referencing that point in any previous
15 report. Do you believe you've actually stated that in a
16 prior report?

17 MR. STOLLER: Object to form.

18 And to be clear, Richard, you're referencing that
19 specific sentence he just read?

20 MR. NORTH: Yes. Yes.

21 THE WITNESS: I haven't written that particular
22 sentence in my other reports to my recollection.

23 BY MR. NORTH:

24 Q Okay. Let's go to the next page, page 4. Do you
25 see the paragraph beginning, "The bench test that Bard

1 MR. NORTH: Objection. No foundation.

2 THE WITNESS: No. They did not.

3 BY MR. STOLLER:

4 Q Were they aware of the fact that the IVC could
5 expand by that much at that point in time?

6 MR. NORTH: Objection. No foundation.

7 THE WITNESS: They were not.

8 BY MR. STOLLER:

9 Q And, so, is there any indication in the IFU that
10 warns treating doctors that the filters shouldn't be
11 implanted in an IVC that is 28 millimeters because it
12 might expand to a greater size?

13 MR. NORTH: Objection to the form.

14 THE WITNESS: Not to my knowledge.

15 BY MR. STOLLER:

16 Q Are there design aspects of the filter that
17 should have taken those issues into account?

18 A Yes.

19 Q And what are they?

20 A The design aspects, such as making sure that the
21 anchoring of the filter to the wall would be effective
22 even as the vena cava became very large so that it would
23 not be prone to tilting and migration when the vena cava
24 becomes very large, and the features that might limit
25 perforation if the vena cava becomes very small, which

1 will tend to make perforation more likely.

2 And since both tilt and perforation contribute to
3 the likelihood of fracture, they would affect the
4 likelihood of fracture by fatigue, and therefore the
5 design should have taken that into consideration in
6 regard to its resistance to fatigue fracture.

7 Q And if a filter is indicated for use in an IVC up
8 to 28 millimeters, should it be also -- in light of the
9 fact that IVC can expand fairly significantly, should it
10 be designed to be safe and effective for use in IVCs
11 greater than 28 millimeters?

12 MR. NORTH: Objection to the form. No
13 foundation. And leading.

14 THE WITNESS: Yes.

15 BY MR. STOLLER:

16 Q Mr. North asked you some questions about your
17 analysis of other filters in the overall IVC filter
18 litigation against Bard and specifically as to FEA
19 analysis you had conducted as to the various filters.
20 And I believe you testified that you had not conducted
21 FEA specific to the Meridian and Denali.

22 Was that your testimony?

23 A That's correct.

24 Q Is that accurate?

25 A No. I realized that I misspoke when I said that

1 the calculations are not relevant to the Meridian because
2 the Meridian in its overall shape is identical to the G2,
3 which I did do calculations for, both finite element
4 calculations and --

5 THE REPORTER: Both?

6 THE WITNESS: -- finite element calculations and
7 other calculations by algebra and calculus, and so on.

8 So, those calculations all apply to the Meridian.
9 They also apply in -- approximately, but fairly
10 accurately, render the approximation to the Denali.
11 Because the shape of the Denali is very similar -- is
12 quite similar to the shapes of the Meridian, the Eclipse,
13 and the G2.

14 BY MR. STOLLER:

15 Q Dr. McMeeking, with respect to the report that is
16 Exhibit 1 here today and the other reports that you've
17 provided in the Bard IVC filter litigation, do those
18 reports accurately set forth your opinion and the basis
19 for opinions that you've arrived at to a reasonable
20 degree of engineering probability?

21 A Yes, they do.

22 Q And in coming to those conclusions and opinions,
23 did you follow a methodology that is utilized by
24 reasonable engineers in your field to resolve these
25 issues?

1 A I did, yes.

2 Q And did you apply the same methods and processes
3 that are used by mechanical engineers in arriving at
4 those opinions?

5 A Yes, I did.

6 Q In order to come to your opinions as to the
7 design and testing of the Bard IVC filters, was it
8 necessary for you to carry out bench testing or animal
9 testing?

10 A No. It was not.

11 Q And do mechanical engineers in your role
12 typically carry out bench testing or animal testing?

13 A Well, many of them carry out bench testing. But
14 animal testing would be an unusual pursuit for a
15 mechanical engineer of my background and professional
16 activities.

17 Q The purpose of the bench -- what's the purpose of
18 bench testing?

19 A The purpose of the bench testing is to simulate
20 the environment that the filter will experience as
21 closely as possible and to investigate whether it will
22 suffer failure modes that need to be avoided once it's
23 implanted in a patient, and also to see whether it -- the
24 filter will be -- is likely to be effective in terms of
25 counting out its function.

1 Q And you've reviewed much of the bench testing
2 that Bard conducted with respect to the IVC filters in
3 this litigation; correct?

4 A That's correct.

5 Q And specifically you've done that as to the
6 Recovery; correct?

7 A That's correct.

8 Q And do those bench -- does that bench testing
9 conform with the standard you just articulated?

10 A No. They do not.

11 Q Did you follow the methodology that engineers use
12 and should follow when doing the analysis that you've
13 done in this case?

14 A Yes, I did.

15 Q And you were asked questions about whether you
16 had inspected Mrs. Tinlin's filter or filter fragments
17 that are still in her body.

18 Do you recall that?

19 A I do.

20 Q Do you need to inspect those in order to arrive
21 at the conclusions you have in this case?

22 A No, I do not.

23 MR. STOLLER: I don't have any further questions.

24 MR. NORTH: Just a few more, Dr. McMeeking.

25

FURTHER EXAMINATION

BY MR. NORTH:

Q Obviously we established earlier that you're not a medical doctor?

A Correct.

Q And you would not consider yourself an expert in human anatomy?

A Correct.

Q Or how the inferior vena cava works; correct?

A Depends how you define expert. I know quite a lot about it. But whether -- I wouldn't declare myself to be an expert.

Q You have no training in how the inferior vena cava works, do you?

A Only self-training. Only self-education.

Q You have no formal education in the anatomical workings of the IVC?

A That's correct.

Q And you have never, before this litigation and your involvement in this litigation, had occasion to deal with the inferior vena cava professionally; correct?

A That's correct.

Q And since you became involved in this litigation, you've had no dealings with the inferior vena cava in any other context other than your litigation consulting?

1 A That's not quite true.

2 There is the work I've done for Edwards in
3 connection with an IVC implant. But that's all.

4 Q Okay. And you have not set out to do a
5 comprehensive review of the medical literature concerning
6 the workings of the IVC; correct?

7 A That's correct.

8 Q And you -- as you sit here today, could you even
9 name the five -- or five leading authorities in the
10 medical literature on the operation of the IVC?

11 A No, I could not.

12 Q How many articles do you think you've even read
13 concerning the operation of the IVC?

14 A I would guess about 50.

15 Q Now, you testified that you believe the -- did I
16 understand you to say that you believe that the FEA you
17 conducted with regard to the G2 would be applicable to
18 the Meridian because the dimensions were identical?

19 A That's correct.

20 Q And, so, it's your belief that the physical
21 dimensions of the Meridian are identical to those of the
22 G2?

23 MR. STOLLER: Object to form.

24 THE WITNESS: Well, there are features on them
25 that are different; for example, the caudal anchors and